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ABSTRACT

The importance of academic program review as the first step in the development of an institutional master plan is emphasized, and the benefits of developing an academic, data-based master plan are identified. The case of Sam Houston State University is used to illustrate the issues. Background information on the institutional milieu and the situation in 1980 are presented. Sam Houston State University determined that a systematic review of academic programs would guide the development of a new 20-year academic program and facility master plan. Development of the plan involved extensive analyses of historical data, academic programs, classroom and laboratory utilization, program productivity (in terms of degrees granted, majors and minors, and semester credit hours generated), and program costs, together with carefully researched projections of program potential. Broad-based involvement of faculty and administrators ensured maximum participation in the development and subsequent acceptance of the plan. Suggestions for other colleges include the following: keep in mind the role and scope of the institution and the individual programs, and decide upon the indices of "academic good health" for which the program will be held accountable. (Author/SW)

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ACADEMIC PROGRAM REVIEW: THE DRIVING FORCE BEHIND A CAMPUS MASTER PLAN

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ABSTRACT

Although institutional master planning is not a new concept, it did not acquire general acceptance in many cases and become an institutional expectation until the decade of the 1960's during which time higher education coordinating boards and councils were established in most states.

Sam Houston State University, when faced with the need of updating its master plan in 1980, determined that a systematic review of academic programs would drive the development of a new 20-year academic program and facility master plan. Extensive analyses of historical data, academic programs, classroom and laboratory utilization, program productivity (in terms of degrees granted, majors and minors, and semester credit hours generated), and program costs, together with carefully researched projections of program potential, guided in the development of the 20-year plan.

Broad-based involvement of faculty and administrators ensured maximum participation in the development and subsequent acceptance of the plan.

The importance of academic program review as the first stop in the development of an institutional master plan is emphasized. Benefits accruing to the institution as a result of an academic data-based master plan are identified and suggestions are offered to other institutions considering a master planning exercise based upon academic program data.

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Introduction

Institutional master planning had been vogue in Texas for quite some time and the creation of the Coordinating Board of the Texas College and University System in 1965 simply locked into place both the function and the process. In many respects the decade of the 1960s was a golden age for higher education in Texas, an age characterized by a massive infusion of public dollars, soaring enrollments, endless construction, and a proliferation of campuses. The golden aura of the sixties rose phoenix-like from what appeared to be a reservoir of funds of infinite size.

The glow of these years yielded to a decade described by some observers as higher education's silver age, a period chastened by the necessity of accepting a philosophy of limits. Coordinating boards began to coordinate, and legislatures looked to these agencies to assist in imposing controls on higher education spending and the proliferation of campuses. In Texas, by the mid-1970s, these changes in attitude were evidenced by moratoria on proposals for new instructional programs; a veritable avalanche of jargon on accountability, cost effectiveness, zero-based budgeting, and management by objective; and halts to all new construction.

The Institutional Milieu

Sam Houston State University proved to be no exception to the new order of the day. When in 1980 Sam Houston State University was reminded by the state coordinating board that an update of its master plan would be due in 1982, the first thoughts were that the new plan would emerge much in the same fashion as had predecessor plans through the years. To the 104-year-old campus, which had been established by the state of Texas as a normal institute in 1879, master planning was not a totally new experience.

Three master plans were developed prior to the beginning of World War II: one early in the century, another at the outset of the decade of the twenties, and still another about 1940. In reality, the plans bore more resemblance to campus maps of their respective eras rather than to plans for future development. Each of those plans took careful note of building placement and of sites where construction may have been in progress at the time. Little attention was given to tracts of land targeted for institutional acquisition.

Then, during the 1950s and 1960s institutional master planning became both fashionable and required with the emergence of higher education councils and coordinating agencies in almost all states. Plans were developed and updated at prescribed intervals, and each plan seemed to revolve around and to derive meaning from historical survey lines, city street right of ways, and location and accessibility of energy supply sources. As the 1970s wore on, the plan updates were adorned elaborately with impressive statistics cataloguing vehicular and pedestrian traffic at key intersections, traffic flow at peak hours, campus access for emergency vehicles, and grade management to accommodate the handicapped. When a plan dared to project the acquisition of

property then not owned by the institutions, almost overnight the square-footage cost of the proposed acquisition escalated astronomically.

The University in 1980

In 1980 the enrollment of Sam Houston State University was 10,601; the 213-acre campus included over 107 buildings--of all kinds, shapes, and sizes--the oldest of which was completed in 1853 to house a private Presbyterian school; and the physical plant value exceeded $85,000,000. The architectural styles are best described as classical American hodgepodge, styles reflecting both the creativity and aspirations of a century of planners. The only consistently distinguishing feature of the buildings--which range in design from Classic Greek Revival to WPA Baroque--is that they were built above the ground rather than below. They provide abundant creditibility to the observation of one of William F. Buckley's characters in the novel, Saving the Queen. Said Sir Alec on that occasion: ". . . the process of elimination . . . is the secret behind most successful architecture, never mind the popular superstitution that all those beautiful contrivances are born of poetic inspiration or theoretical sunbursts . . . ."[1]

So the university approached the revision of the master plan not totally inexperienced in such activity, but it did face a changed situation. It was apparent that both enrollment and semester credit hour growth had stabilized during the 1970s. To complicate the matter, the state coordinating board contended--with some logic--that a stabilized enrollment warranted no new space, regardless of the condition of the existing space; and that money should not be spent to upgrade buildings that were not structurally sound.

Also, the university was reporting instructional square footage far in excess of the square footage ratio per student recognized as acceptable by the state coordinating board, approximately 100 square feet per student. As a result, the advocate of any plan which projected the construction of new facilities had to navigate a perilous channel mined with sacrosanct utilization ratios.

Further, approximately 50 percent--almost 2,000--of the dormitory spaces owned by the university were situated in the heart of the campus, a location which three decades earlier had appeared to be ideal. However, now these dormitory locations blocked campus expansion in about the only direction in which land could be acquired, thereby hindering the acquisition and development of centrally located space needed for academic programs and recreation.

The average age of the academic buildings on campus was over thirty years and the state legislature was showing increasingly little interest in making available money to maintain and/or restore "old" edifices. The unmistakable--though somewhat muffled--signal from the state capital was that the university should demolish some of the older structures on campus rather than assail biennially the legislature for additional repair and rehab money. Affairs were complicated infinitely when representatives of the state historical and antiquities commissions joined the debate to voice alarm about rumors of demolishing buildings of "historic value."

Thus, the stage was set for the development of an update of the university's existing master plan.

The Commitment to Academic Program Review

Few decisions are made in isolation on most campuses, but occasionally a decision emerges from a situation of apparent isolation, which indeed more accurately represents the emergence of a seedling from a soil carefully prepared to nourish its birth. Thus was the experience with the decision of the president of the university that any master plan update or the development of a new plan would be driven by academic program review. The president arrived at that decision after months of discussions and tough decision-making sessions dealing with the fate of academic programs and the reallocation of academic resources. In short, between 1978 and 1981 the course inventory of the university was reduced by 217 courses, 31 degree options were dropped, 6 degree programs eliminated completely, 3 deanships abolished, and 31 departments melded into 20 departments and 1 school. So--it is somewhat of an understatement to say that the president of the university was in a proper frame of mind to direct that any new master plan efforts should be driven by academic program review. Also, he directed that the plan address facility needs for a twenty-year period of time.

Where does one begin with academic program review? The stage was set by a system of academic productivity reports which had been implemented in 1978, the purpose of which was to monitor the "health" of every academic program on campus. It was acknowledged early that numerous academic decisions regarding the fate of programs could not be made strictly on the basis of objective data, i.e., that most always a subjective consideration would enter into the picture. However, it was believed that an academic decision based upon as much data as possible would provide a more intelligent and a more easily

defended decision. The academic productivity reports identified several indices of academic program health which could be measured (see figures 1, 2, 3, 4, and 5):

>> the number of majors and minors

>> the number of full-time equivalent students and full-time equivalent faculty

>> the number of semester credit hours produced at the graduate level and at the undergraduate level

>> the number of degrees by program granted within a specified period

>> the student/teacher ratio

>> the recent record of success or failure in the placement of graduates for each program

>> the profit/loss picture with regard to the program, i.e., the cost of faculty salaries and operating expense versus revenue generated by the semester credit hour formula, etc.

In short, every possible quantifiable index was selected in the interest of providing a program an opportunity to demonstrate its state of health. The decisions on the elimination of programs and the continuation of programs between 1978 and 1980 were made with careful reference to the academic productivity reports. Consequently, this experience provided a helpful context for the development of a master plan driven by an academic data base.

Developing the Academic Master Plan: Commitment, Process, and Procedure

A critical decision, in retrospect, appears to have been one to select an architect/planner with a strong appreciation for an academic setting. In reality, this particular architect/planner was a professor of architecture at

another university who simply had as his main livelihood source a rather substantial architectural firm. He had an immense appreciation of the academic community and his approach to assisting the university with the development of an academic master plan was to virtually "move" to the campus for a period of three or four months in which he would become better acquainted with the campus--perhaps better than anyone thereon.

The role of the university was prescribed to be one of assistance in data collection and determination of projections for individual academic programs. The responsibility of the planner would be to recommend physical facilities needs to support the projections and to determine how the institution could best meet the expectations of the various external agencies whose concurrence with the plan was necessary, i.e., the Board of Regents, the Coordinating Board, the Legislative Budget Board, and the State Legislature. In short, an opportunity was present for the university to specify where it was going in the remaining two decades of the twentieth century; but it would be the role of the planner to respond to those projections with a statement of what the university would need when it got there. The planner and members of his firm spent most of the summer of 1981 on the university campus amassing data, visiting each classroom and office, and inspecting each academic structure.

A committee of key academic administrators was organized to assist the planner in amassing and analyzing academic data for an arbitrarily selected five-year base period, 1975-80. Histograms (see figures 6, 7, and 8) were developed portraying trends peculiar to each academic program on campus for the base period, trends relating to majors, minors, degrees granted, semester credit hour productivity, cost of programs, revenue generated by programs, and

headcount enrollment. These histograms were reviewed in the broader context of trends for the entire decade of the 1970s to ensure compatibility and reliability.

This committee played another highly important role. Keying off the new data base and the histogram analyses, the committee asked each of the academic leaders to develop twenty-year projections for each of their respective program areas--projections based upon research and trends at both the regional and national levels. Also, it was agreed that since the state coordinating board had established total enrollment projections for the university for the next two decades and since the university had accepted those projections as realistic, the program projections of enrollment growth could not exceed the coordinating board enrollment growth data. In conjunction with this exercise, the committee accepted one additional ground rule: the emerging data, trends, and projections would be allowed to speak for themselves. No member of the committee could advocate which buildings should be razed, which should be built, etc. In short, the data would drive the plan; and the planner would develop ways to respond to the needs.

During the subsequent fall semester enrollment period, the classroom utilization was monitored by the planner with results that were shocking to the institution. A simulated "clock" (see figures 9 and 10) was developed for each classroom on campus, a "clock" reflecting hours of the day in which the room was in use, semester credit hours produced during those hours, cost of operating the room for those hours, the number of students involved, etc.

This exercise alone provided more information regarding who was using what and how than ever before had been amassed. It, along with the productivity

reports and the histograms, effectively dispelled several myths regarding needs and utilization associated with some programs.

Several other interesting and influential facts emerged:

>> Some classroom buildings were "workhorses" and generated a surprisingly large number of semester credit hours and formula revenue; others showed very little semester credit hour productivity.

>> The heaviest student pedestrian traffic pattern on campus was along an axis between two classroom buildings--where there was no pedestrian mall.

>> In terms of semester credit hour productivity, the historic quadrangle area of the campus proved to be largely a lower division campus; whereas, the area of the campus developed between 1965 and 1976, often called the East Campus, emerged as an upper division professional area.

>> Some academic programs on campus operated in as many as seven different locations; and in general, the concept of departmental territoriality was so rare in practice as to be almost nonexistent.

By mid-fall semester, the committee had gone about as far as it could go. The utilization statistics, enrollment data, program growth projections, and productivity records began to produce patterns. Likewise the point was reached at which decisions were required on program growth and needs before the planner could proceed with his work. The arbiter for these decisions by direction of the president was the academic vice president.

How were those decisions made? The data were allowed to speak for themselves to the fullest extent possible and in most cases, it spoke both

adequately and convincingly. In those cases where the data were less convincing or where the projections advanced were highly speculative, all parties were heard. Each department chair had ample opportunity to present a case and supporting data. Likewise each dean had the same opportunity to argue on behalf of a program. But once all arguments had been presented, it became the responsiblity of the academic vice president to recommend a course of action to the president.

Three stories come to mind, all of which offer lessons which need to be kept paramount in any review process.

Over a decade ago Darrell Royal, during the time in which he served as the coach of The University of Texas football team, made the statement on the eve of a Cotton Bowl game--I believe with Notre Dame--that he would "dance with who brung him" rather than to change his offense in the face of some new shift in offense or defense which might be offered by the fighting Irish. My point in citing this is: those of us who work in the academic community, to a great degree, "dance with who brung us." You must keep in mind that the department chairs, deans, and other personnel with whom you will be working will be influenced by their prejudices, biases, and vested interests--as you will be. So it is best to admit those at the outset. It simply encourages a more open planning, review, and evaluation process.

Another point is made most effectively by an account which was related by Rourke and Brooks in The Managerial Revolution In Higher Education. I quote:

> The individual source of the statistics may easily be the weakest link. Harold Cox tells a story of his life as a young man in India. He quoted some statistics to a Judge, an Englishman, and a very good

> fellow. His friend said, "Cox, when you are a bit older, you will not quote Indian statistics with that assurance. The Government are very keen on amassing statistics--they collect them, add them, raise them to the nth power, take the cube foot and prepare wonderful diagrams. But what you must never forget is that every one of those figures comes in the first instance from the clowty dar (village watchman), who just puts down what he damn pleases."[2]

The point is that even the data can be manipulated; so one must be alert to that possibility.

The third story with bearing is the account of a young lad, an old man, and a donkey who were making a cross-country journey. The old man grew weary and decided to ride on the donkey. As they passed through a community, the local citizenry hurled insults and ridiculed the old man for his calloused attitude toward the boy, i.e., in making the boy walk. The old man grew concerned and once they left the community he insisted that the boy ride and that he walk. So when they came to the next community, the young lad became the object of the citizens' derision and they critized him for riding and making the old man walk. So after leaving that community the old man climbed atop the donkey alongside the lad, feeling that that was the perfect solution to the problem. Soon they approached a footbridge across a swift-flowing river. As they crossed the footbridge, it broke--the old man and the boy still being atop the donkey--and all three fell in and the donkey was washed away. Only by struggling to hold on to tree limbs and branches did the old man and the boy pull themselves to safety. The moral to this story is simply this: if you work too hard in attempting to please everyone, you likely will lose your ass.

No serious master planning activity will leave everyone pleased, but our experience was that it left the vast majority of people pleased because most of them had been consulted at some point in the process and most were convinced that the plan was rooted in a solid data base.

Working the Plan

What of today? The plan is being implemented. Three classroom and office buildings with an average age of 69 years have been demolished and 308 beds have been removed from the housing inventory as the result of the razing of dormitories. The interim relocation of several instructional programs has been accomplished. By January of 1984 three new buildings will be "coming out of the ground," and the ratio of square footage per student will have been substantially improved.

All American institutions have their elder statesmen, and Logan Wilson is at the forefront of those for higher education. His comment of a decade ago in Shaping American Higher Education seems most appropriate.

> Like all other social institutions, the university is imperfect. To keep abreast of the times, it must accommodate to change; to rise above mediocrity, it must also promote change and anticipate as well as evaluate future options. The university, at its best, however, is an instrument of both stability and change. No matter what modifications may be desirable, the university must be maintained as a bastion of rationality and civility, a place that educates men and women to be problem-solvers rather than problem-makers, a center of free and objective inquiry, and an institution that is valued and respected for its indispensable services to all mankind.[3]

It is highly likely that the university envisioned by Wilson cannot survive without a broad-based, participatory, academically oriented planning process.

In conclusion, let me offer a few "lessons" learned for your consideration:

1. Keep prominently before you the role and scope of the institution and of the individual programs therein. It is all too easy during a master planning process to venture off in new directions programmatically. If this is allowed, make certain that it comes as the result of a conscious decision to permit such rather as the result of indecision.
2. Decide internally those indices of "academic good health" for which you will hold a program accountable.
3. Do not stray from those indices, but always be willing to admit that there is a subjective factor which sometimes cannot be equated in terms of data.
4. If you have the opportunity in the course of employing an architect/planner to assist you with developing an academic master plan, hire someone who knows the academic community, preferably someone who has worked there.
5. Involve a great many people, i.e., faculty, department chairs, deans, etc., in working toward decisions regarding program health and program needs. It is better to have them on your side than on your back.
6. Decide in advance that you are simply not going to "fly by the seat of your pants." If data are not available, do not decide. The data are there; it simply will need to be amassed.
7. Keep the president on the sled. It is perfectly all right for the president to listen to emotional pleas from departments whose futures are in

doubt. It is a totally different ballgame, however, for the president to listen to those pleas and then to decide to alter priorities on the basis of emotion rather than on the basis of fact.

8. Let the data speak for themselves. Many times a very good case rooted firmly in data is lost because it is completely obscured by unnecessary verbiage. Sometimes with words we say: "speak up or shut up." Perhaps the lesson there for those of us who work with data is "put up or shut up." My experience is that most of the time that works beautifully.
9. Keep the faculty informed about what is going on. Rumors are both inevitable and invidious. I have worked on a college or university campus for a quarter of a century and never have I discovered a totally effective way to diffuse a rumor. If a master plan study is underway or if the fate of a program is at stake, it should be publicly stated. The available data should not be shrouded in secret. My experience is that the same data which convinces me are equally convincing to many of my academic colleagues.

The master plan at Sam Houston State University has been implemented and the general consensus is that it is emerging as a solid, well-conceived plan--sensitive to institutional needs--largely because it was driven by the review and reappraisal of academic programs.

FOOTNOTES

[1]William F. Buckley, Jr., Saving the Queen (New York, 1976), p. 72.

[2]Francis E. Rourke and Glenn E. Brooks, The Managerial Revolution in Higher Education (Baltimore, 1966), pp. 126-127.

[3]Logan Wilson, Shaping American Higher Education (Washington, 1972), pp. 300-301.